An ethnobotanical survey of southern African Menispermaceae

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Abstract

The family Menispermaceae is highly specialized in its rich diversification of biologically active bisbenzylisoquinoline alkaloids. Because of this richness the family is used worldwide in traditional medicines to treat a wide variety of ailments. An ethnobotanical survey focusing specifically on the seven genera and 13 species of this family indigenous to South Africa has yielded 64 valuable anecdotes, of which 38 are new records.

Cissampelos capensis [dawidjies (wortel)] is the best known and most used medicinal plant, especially by Khoisan and other rural people in the western region of South Africa. The survey had confirmed the known medicinal uses and added several additional anecdotes for this species. Although poorly recorded and hardly ever sold on traditional medicine markets, Albertisia delagoensis and Cissampelos hirta turned out to be very important in rural areas of KwaZulu-Natal for treating a range of different ailments. Medicinal uses for Tiliacora funifera, Tinospora caffra and Tinospora tenera are recorded for the first time. A summary of all published and unpublished ethnobotanical information for southern African Menispermaceae is presented.

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1. Introduction

The family Menispermaceae consists of 75 genera, with 520 species (Watson and Dallwitz, 1992). Because of its richness in bisbenzylisoquinoline alkaloids, this family is used worldwide in traditional medicine to treat a variety of ailments (Barbosa-Filho et al., 2000; De Wet et al., 2004, 2005). A literature survey revealed that twenty-one genera are used for medicinal purposes in Africa and twenty-nine genera in the rest of the world. The following genera are being used both in Africa and the rest of the world: Cissampelos, Cocculus, Dioscoreophyllum, Jatrohiza, Sphenocentrum, Stephania, Tiliacora, Tinospora and Triclisia (Neuwingen, 2000; Duke, 2007; De Wet, 2006). The southern Africa Menispermaceae comprise seven genera and thirteen species, of which one genus and three species are endemic to the region (Table 1). In South Africa, some ethnobotanical information has been recorded (summarized in Arnold et al., 2002) but only one species, Cissampelos capensis (L.f.) Diels [dawidjies (wortel)], is a well-known and much used medicinal plant, particularly in the Eastern and Western Cape Provinces (Watt and Breyer-Brandwijk, 1962; Smith, 1966; Rood, 1994). Noteworthy is the almost total absence of published records for Cissampelos hirta Klotzsch, Albertisia delagoensis (N.E. Br.) Forman, Stephania abyssinica (Dill. & A. Rich.) Walp., Tinospora species and Tiliacora funifera (Miers) Oliver. The aim of this study was to systematically document and record all published and unpublished ethnobotanical information and to selectively enrich these records through own field studies and surveys.

2. Materials and methods

A list of all South African Menispermaceae species is given in Table 1, together with their author citations (not repeated hereafter). A thorough literature study of all published medicinal and other uses of Menispermaceae in southern Africa is presented here. Type of references includes books (18), journals (15), online (1) and unpublished data (3). In addition, unpublished information and anecdotes were
Table 1
List of all 13 species of the family Menispermaceae indigenous to South Africa

<table>
<thead>
<tr>
<th>Genera</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albertisia Becc.</td>
<td><em>Albertisia delagoensis</em> (N.E. Br.) Forman</td>
</tr>
<tr>
<td>Antizoma Mierson</td>
<td><em>Antizoma angustifolia</em> (Burch.) Mierson ex Harv.</td>
</tr>
<tr>
<td>Citampelos L.</td>
<td><em>Citampelos capensis</em> (L.f.) Diels</td>
</tr>
<tr>
<td></td>
<td><em>Citampelos hirta</em> Klotzsch</td>
</tr>
<tr>
<td></td>
<td><em>Citampelos mucronata</em> A. Rich.</td>
</tr>
<tr>
<td></td>
<td><em>Citampelos torulosa</em> E. Mey. ex Harv.</td>
</tr>
<tr>
<td>Cocculus DC.</td>
<td><em>Cocculus hirsutus</em> (L.) Diels</td>
</tr>
<tr>
<td>Tiliacora Colebr.</td>
<td><em>Tiliacora funifera</em> (Miers) Oliver</td>
</tr>
<tr>
<td>Tinospora Miers</td>
<td><em>Tinospora caffra</em> (Miers) Troupin</td>
</tr>
<tr>
<td></td>
<td><em>Tinospora fragosa</em> (Verdoorn) Verdoorn &amp; Troupin</td>
</tr>
<tr>
<td></td>
<td><em>Tinospora tenera</em> Miers</td>
</tr>
</tbody>
</table>

Table 2
List of persons with knowledge of the traditional uses of Menispermaceae that were interviewed during field survey work

<table>
<thead>
<tr>
<th>Name</th>
<th>Locality</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>KwaZulu-Natal:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phiwile</td>
<td>Mubatuba market</td>
<td>Healer</td>
</tr>
<tr>
<td>Buthelezi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magret</td>
<td>Kosi Bay</td>
<td>Knowledge from grandfather</td>
</tr>
<tr>
<td>Makhanya</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sokale</td>
<td>Kosi Bay</td>
<td>Sangoma</td>
</tr>
<tr>
<td>Manzini</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zodwa</td>
<td>Mabibi</td>
<td>Mother was a healer</td>
</tr>
<tr>
<td>Mbonambi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thembeni</td>
<td>Mubatuba market</td>
<td>Healer</td>
</tr>
<tr>
<td>Motha</td>
<td></td>
<td></td>
</tr>
<tr>
<td>John</td>
<td>Kosi Bay</td>
<td>Knowledge from other healers</td>
</tr>
<tr>
<td>Mthembu</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vusi</td>
<td>Kosi Bay</td>
<td>Grandfather was a healer</td>
</tr>
<tr>
<td>Mthembu</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regina</td>
<td>St. Lucia</td>
<td></td>
</tr>
<tr>
<td>Mthiyane</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Litina Nsele</td>
<td>Mabibi</td>
<td></td>
</tr>
<tr>
<td>Thoka</td>
<td>Dukuduku Forest, St. Lucia</td>
<td></td>
</tr>
<tr>
<td>Nxumalo</td>
<td>St. Lucia</td>
<td></td>
</tr>
<tr>
<td>Solomon</td>
<td>St. Lucia</td>
<td></td>
</tr>
<tr>
<td>Shabalala</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deliwe</td>
<td>Kosi Bay</td>
<td></td>
</tr>
<tr>
<td>Tembe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tembe</td>
<td>Kosi Bay</td>
<td>Works as a healer in KwaMbonambi</td>
</tr>
<tr>
<td>Magidiva</td>
<td>Mabibi</td>
<td>Knowledge from other healers</td>
</tr>
<tr>
<td>Zikhali</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thembhi</td>
<td>Mubatuba market</td>
<td>Healer</td>
</tr>
<tr>
<td>Zondo</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Results

3.1. *A. delagoensis*


Root extract is drunk for:

- Menstrual pain (Zikhali, 2003, pers. comm.)
- Chest problems (Mbonambi, 2003, pers. comm.)
- Body pain, as when suffering from influenza (Mthembu, 2003, pers. comm.)
- Burn root: put ash on sores (Mthembu, 2003, pers. comm.)
- Back pain (Mthembu, 2003, pers. comm.)
- To clean stomach of baby: boil root and leaves (Mthembu, 2003, pers. comm.; Tembe D., 2003, pers. comm.)
- Pregnant women drink root to clean stomach, so that the unborn child will stay healthy (Tembe D., 2003, pers. comm.)
• To stop diarrhoea and vomiting (Tembe D., 2003, pers. comm.; Tembe T., 2003, pers. comm.)
• Stomach problems, not eating well (Tembe T., 2003, pers. comm.)
• Fever (Jansen and Mendes, 1983).

3.3. Antizoma miersiana

Vernacular names. Afrikaans: maag-bitterwortel (Rood, 1994); Damara/Nama: orab (Von Koenen, 2001).

Root tea is drunk for:

• Blood purification for boils (Rood, 1994)
• Emetic and purgative action (Rood, 1994)
• Kidney stones (Rood, 1994)
• Bladder problems (Rood, 1994)
• Stomach pain (Von Koenen, 2001)
• Burning pain in stomach (Hedberg and Staugård, 1989)
• Dysentry (Rood, 1994)
• Diarrhoea (Von Koenen, 2001)
• Blood in stool (Von Koenen, 2001)
• Gastrointestinal problems (Watt and Breyer-Brandwijk, 1962)
• General pain (Von Koenen, 2001)
• Coughs (Von Koenen, 2001)
• Colic (Hedberg and Staugård, 1989)
• Gall-bladder problems (Hedberg and Staugård, 1989)
• Liver complaints indicated by lack of appetite (Hedberg and Staugård, 1989)
• Easy delivery: expectant women are encouraged to take the decoction from their fourth month of pregnancy. This causes the fetus to stay mobile for an easy delivery (Von Koenen, 2001).

Leaves and root are chewed or drunk as a tea for:

• Digestive problems and general malaise (Von Koenen, 2001).

3.4. Cissampelos capensis


For the colonist the difference between dawidjies (wortel) (Menispermaceae) and dawidjiewortel (Cucurbitaceae) was very distinct, but later on the difference in the names grew faint and nowadays both names are used in both families (Smith, 1966).

Root extract or decoction is drunk for:

• Gravel and glandular swelling (Watt and Breyer-Brandwijk, 1962)
• Gall stones (Rood, 1994)
• A weak brandy tincture for dysentery (Smith, 1895)
• Mucous membrane infection (Rood, 1994)
• Menstrual problems (Von Koenen, 2001)
• Prevention of miscarriage (Von Koenen, 2001)
• Difficult labour (Von Koenen, 2001)
• Expelling the placenta (Von Koenen, 2001)
• Appetite stimulant (Von Koenen, 2001)
• Blood purification (Watt and Breyer-Brandwijk, 1962; Rood, 1994; Van Wyk and Gerickie, 2000; Oormeyer, 2001, pers. comm.; Williams, 2002, pers. comm.)
• Antisyphilitic use (Watt and Breyer-Brandwijk, 1962)
• Cholera (Watt and Breyer-Brandwijk, 1962)
• Colic (Watt and Breyer-Brandwijk, 1962; Salmons, 2001, pers. comm.)
• Bladder problems (Watt and Breyer-Brandwijk, 1962; Rood, 1994)
• Snakebite (Watt and Breyer-Brandwijk, 1962)
• Stomach pain (Cupido, 2001, pers. comm.; Steenkamp, 2001, pers. comm.)
• Stomach problems: mixed with bird-lime (Salmons, 2001, pers. comm.)
• Influenza: mixed root with “Boegoe” [Agathosma betulina (Berquis) Pillans] (Steenkamp, 2001, pers. comm.)
• Toothache: chew root (Cupido, 2001, pers. comm.)
• A sedative effect by chewing the rhizome (Van Wyk and Gerickie, 2000)
• For treating pain, using infusions (Van Wyk and Gerickie, 2000)
• Biliary complaints (Oormeyer, 2001, pers. comm.)
• Measles: mix root with half a teaspoon Epsom Salt (Theo, 2001, pers. comm.)
• Fever: mixed root with “grandpa powder” (a headache powder, which contains aspirin, paracetamol and caffeine), vinegar and sugar (Cupido, 2001, pers. comm.)
• Headache: smoke inhaled through nostrils to treat headache (Van Wyk and Gerickie, 2000)
• Diabetes (Van Wyk and Gerickie, 2000)
• Tuberculosis (Van Wyk and Gerickie, 2000)
• Stomach and skin cancers (Van Wyk and Gerickie, 2000)
• Purgative (Van Wyk and Gerickie, 2000)
• Good-luck charm: root is carried around (Von Koenen, 2001).

Leaves are used for:

• Ulcers and syphilis sores: paste is used (Watt and Breyer-Brandwijk, 1962; Rood, 1994)
• Snakebite wound: paste is used (Smith, 1895).

Caution is advised with regard to dosage, as the leaves are said to be poisonous (Watt and Breyer-Brandwijk, 1962).

3.5. Cissampelos hirta

Vernacular names. Zulu: khalimelo (Zondo, 2003, pers. comm.), indlebelenkawu (Mthembu, 2003, pers. comm.; Nsele, 2003, pers. comm.), intandela (Makhanya, 2003, pers. comm.), umanyokane...
3.6. Cissampelos mucronata

Vernacular names. Afrikaans: "dawidjies (wortel)" (Smith, 1966; Hutchings et al., 1996; Pooley, 1998); Zulu: "umxomba" (Hutchings et al., 1996; Pooley, 1998).

Root decoction is drunk for:

- Hallucinations (Watt and Breyer-Brandwijk, 1962)
- Hallucinations: leaf decoction administered as an enema to treat hallucinations (Van Wyk and Gerice, 2000)
- Vomiting blood (Watt and Breyer-Brandwijk, 1962)
- Stoping vomiting (Tembe T., 2003, pers. comm.)
- Scrofula: as an enema (Watt and Breyer-Brandwijk, 1962; Bryant, 1966)
- Stomach problems, especially if one does not eat, such as with AIDS patients (Tembe T., 2003, pers. comm.)
- Itching skin on private parts: boil with bulb of African potato and leaves of unuvuthuza, boil and drink as a tea (Mthiyane, 2003, pers. comm.)

Leaf decoction is drunk for:

- Syphilis (Watt and Breyer-Brandwijk, 1962; Smith, 1966)
- Kidney pain: mixed with leaves of an unknown plant (Motha, 2003, pers. comm.)
- Toothache: root is chewed (Watt and Breyer-Brandwijk, 1962; Hutchings et al., 1996).

3.7. Cissampelos torulosa

Vernacular names. kidney-leaf (Pooley, 1998); Afrikaans: dawidjies (wortel) (Smith, 1966; Hutchings et al., 1996; Pooley, 1998); Zulu: iphakama (Zondo, 2003, pers. comm.), mabuyisa (Zikhali, 2003, pers. comm.), ukhalimele-omkhulu (Hutchings et al., 1996; Pooley, 1998); umthombo (Hutchings et al., 1996; Pooley, 1998), uphindamshaye (Mbonambi, 2003, pers. comm.); Tsonga-Shangaan: khadi [herbarium specimens, Obermeyer 495 (PRE)].

Root decoction is drunk for:

- Syphilis (Watt and Breyer-Brandwijk, 1962; Smith, 1966)
- Kidney pain: mixed with leaves of an unknown plant (Motha, 2003, pers. comm.)
- Toothache: root is chewed (Watt and Breyer-Brandwijk, 1962; Hutchings et al., 1996).

Leaf decoction is drunk for:

- Hallucinations (Watt and Breyer-Brandwijk, 1962)
- Hallucinations: leaf decoction administered as an enema to treat hallucinations (Van Wyk and Gerice, 2000)
- Vomiting blood (Watt and Breyer-Brandwijk, 1962)
- Stoping vomiting (Tembe T., 2003, pers. comm.)
- Scrofula: as an enema (Watt and Breyer-Brandwijk, 1962; Bryant, 1966)
- Stomach problems, especially if one does not eat, such as with AIDS patients (Tembe T., 2003, pers. comm.)
- Itching skin on private parts: boil with bulb of African potato and leaves of unuvuthuza, boil and drink as a tea (Mthiyane, 2003, pers. comm.)
- Skin pain: put leaves in hot water, wash skin with water (Zikhali, 2003, pers. comm.).

Leaf paste uses:

- Dressing for scrofula (Watt and Breyer-Brandwijk, 1962; Bryant, 1966)
- Syphilitic sores, used by Xhosa people (Smith, 1895; Watt and Breyer-Brandwijk, 1962).

Stem:

- Sharp pain in the side: boiled stem is drunk (Mbonambi, 2003, pers. comm.).
Plant:

- Whole plant is used for ritual purification by the Vhavenda (Mabogo, 1990)
- The plant is taken by pregnant women to make labour easier (Hutchings et al., 1996).

3.8. Cocculus hirsutus

Vernacular names. monkey rope [herbarium specimens, Smith 2474, Polwier 88 (PRE)]; Tsonga: xootso [herbarium specimens, Liengme 89 (PRE)].

- Stems are used to make conical baskets (xirundzu) (Watt and Breyer-Brandwijk, 1962; Liengme, 1981)
- Berries are used for dying basket material and are eaten by Shangaan people [herbarium specimen, Gerstner 5451 (PRE)]
- Plant extract is drunk for diseases in babies in Botswana [herbarium specimen, Woollard and Kgathi 2211 (PRE)].

3.9. Stephania abyssinica

Vernacular names. Zulu: umbombo (Hutchings et al., 1996; Pooley, 1998), umthambane (Hutchings et al., 1996), umthombo (Hutchings et al., 1996; Pooley, 1998).

- Root decoction is drunk for:
  - Boils (+ Momordica foetida Schumach.) by Zulus (Watt and Breyer-Brandwijk, 1962).
  - A charm to find lost articles or discover secrets (Pooley, 1998)
  - A magic medicine as used by the southern Sotho to prevent a person being struck by lightning which has been sent by an enemy (Watt and Breyer-Brandwijk, 1962).

3.10. Tiliacora funifera

Vernacular names. Zulu: umndiza (Mbonambi, 2003, pers. comm.).

- To make women more fertile, mix root with other plant parts (unknown) and drink (Mbonambi, 2003, pers. comm.).

Table 3

The medicinal uses of the 12 Menispermaceae species in South Africa (categories as defined in Cook, 1995)

<table>
<thead>
<tr>
<th>Species</th>
<th>Plant part use</th>
<th>Abnormalities</th>
<th>Digestive system disorders</th>
<th>Endocrine system disorders</th>
<th>Genitourinary system disorders</th>
<th>Ill-defined symptoms</th>
<th>Infections/infestations</th>
<th>Inflammation</th>
<th>Injuries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albertisia delagoensis</td>
<td>Root</td>
<td>–</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>–</td>
<td>5</td>
<td>–</td>
<td>–</td>
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<tr>
<td>Antizoma angustifolia</td>
<td>Root</td>
<td>9</td>
<td>–</td>
<td>2</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Antizoma miersiana</td>
<td>Leaves</td>
<td>–</td>
<td>1</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Cissampelos capensis</td>
<td>Root</td>
<td>9</td>
<td>2</td>
<td>3</td>
<td>–</td>
<td>8</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Cissampelos hirta</td>
<td>Leaves</td>
<td>–</td>
<td>10</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Cissampelos mucronata</td>
<td>Root</td>
<td>3</td>
<td>5</td>
<td>10</td>
<td>1</td>
<td>5</td>
<td>–</td>
<td>1</td>
<td>–</td>
</tr>
<tr>
<td>Cissampelos torulosa</td>
<td>Leaves</td>
<td>–</td>
<td>3</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>8</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Stephania abyssinica</td>
<td>Root</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
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<tr>
<td>Tiliacora funifera</td>
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<tr>
<td>Tinospora caffra</td>
<td>Leaves</td>
<td>–</td>
<td>–</td>
<td>–</td>
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<td>–</td>
<td>–</td>
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<tr>
<td>Tinospora fragosa</td>
<td>Plant</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>2</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Tinospora tenera</td>
<td>Leaves</td>
<td>–</td>
<td>1</td>
<td>2</td>
<td>–</td>
<td>1</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

The number of medicinal records is indicated in the table.

*a Cocculus hirsutus is not used for any medicinal purpose in South Africa.*
3.11. Tinospora caffra


Plant:
- Used as a fish poison (Pooley, 1998).

Leaves:
- Body pain: inhale steam of boiling leaves (Zondo, 2003, pers. comm.)
- Sleeping problems: mix leaves with unknown leaves and sprinkle water in room (Tembe T., 2003, pers. comm.).

3.12. Tinospora fragosa

Vernacular names. Aaron’s rod, *wonderplant* (Van Jaarsveld, 2002), saddle’s stirrup (Rodin, 1985), Moses’ staff (herbarium specimen *Croeser 35* PRE); Afrikaans: *Aaron-se-staf* (Van Jaarsveld, 2002); Kwanyama: *eposa* (Rodin, 1985), *omaposa* (Rodin, 1985), *omaphsha* (Rodin, 1985); penyaleng in the Lydenburg area (Verdoorn, 1941).

Plant:
- Anthrax: plant is given as fodder to healthy cattle (Rodin, 1985)
- Anthrax sores: infusion of twigs and leaves is applied (Rodin, 1985).
- Cough: twigs are chewed and sap swallowed (Neuwinger, 2000)
- Sore throat: twigs are chewed and sap swallowed (Neuwinger, 2000)
- Rheumatism and other bodily pains: stems and leaves used as a Turkish or mustard bath (herbarium specimen, *Barnard 58*, PRE)
- Plants are grown in kraals for good luck and to keep snakes away (Rodin, 1985).

3.13. Tinospora tenera

Vernacular name. Zulu: *umdlandlatho* (Zondo, 2003, pers. comm.).

Leaf extract is drunk for:
- Pain in joints (Tembe T., 2003, pers. comm.)
- Better sexual performance in men (Tembe T., 2003, pers. comm.)
4. Discussion

No medicinal uses for southern Africa were found in the literature for *C. hirta*, *T. funifera*, *T. caffra* and *T. tenera* and only one reference was found for *A. delagoensis*. The field survey work showed that these species are commonly used for a range of ailments, as summarized in Table 3. In South Africa, *C. hirsutus* is used only in basket-making and not in traditional medicine. Ethnobotanical research in the north-eastern parts of KwaZulu-Natal and the eastern parts of the Karoo recorded several new uses and confirmed some uses already documented.

*C. capensis* is medicinally by far the most used species in southern Africa, followed by *C. mucronata* (Table 3). Digestive system disorders are the most recorded ailments treated with *A. delagoensis*, both *Antizoma* species and all four *Cissampelos* species. Further important medicinal uses (three and more citations) for these species are: for blood purification, anthelmintic and parasite medicine, as aphrodisiac, for pain, women’s ailments, venereal diseases and as antiseptic on wounds. The most cited medicinal use for *C. capensis* is for blood purification and it is also the only Menispermaceae species in southern Africa which is used for this purpose. *A. delagoensis* and *C. mucronata* are mostly used to treat worms and parasites and are also important traditional aphrodisiacs. Three of the four *Cissampelos* species (all except *C. mucronata*) are used as analgesic medicines, with *C. mucronata* the only species to be used as an abortifacient. Fever is mostly treated with *C. capensis*, with two citations for *A. delagoensis* and one citation for *T. tenera*. Women’s ailments (menstrual- and pregnancy-related problems) are mostly treated with the genus *Cissampelos* (Table 3). Digestive and stomach problems, menstrual problems, pregnancy-related problems, as a diuretic, for wounds and ulcers. *Tinospora* is mostly used in the rest of the world as an anthelmintic, for arthritis and rheumatism, diabetes, fever, malaria, wounds, ulcers and as a tonic.

It can be concluded that a need exists to document indigenous knowledge on traditional plant uses before it becomes lost to future generations. The lack of literature records for some of the South African Menispermaceae genera and species shows that there is still considerable scope for field work to record traditional uses in South Africa.

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